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Ivan W. Ong

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

LANGMAN, JONATHAN C

ART UNIT

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09/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,594	Applicant(s) ONG ET AL.	
	Examiner JONATHAN C. LANGMAN	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) 28-65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of claims 1-27 in the reply filed on June 1, 2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 28-65 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 1, 2009.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 13 and 19-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The applicant amended claim 1 to read that the antimicrobial agent migrates through the polymeric binder. The applicant teaches that the only antimicrobial agents

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that exhibit the ability to migrate through the polymeric binder are those seen in claims 17, 18, and instant paragraph ([0042]). The Examiner can not find, and the applicant has not shown, support for the antimicrobial agents of claims 13 and 19-23 being able to migrate through the polymeric binder.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the applicant claims that the composite material comprises an antimicrobial agent, wherein the antimicrobial agent is homogeneously distributed in the polymeric binder such that the antimicrobial agent migrates through the polymeric binder. This claim is internally inconsistent. The applicant is claiming that the composite comprises homogeneously distributed agents, however also states that the agent is migrated (i.e. not homogeneous).

It is unclear how the agent can be homogeneously distributed and also migrated. In the specification paragraph ([0042]), the applicant teaches that the agent may migrate to the surface (i.e. provide higher concentrations at the surface) of the composite in order to improve the antimicrobial efficacy of the composite. It is unclear how there can be a migration of antimicrobial agents (i.e. higher concentrations) at the

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surface and still have a composite with the antimicrobial agent homogenously distributed.

The applicant teaches in paragraph [0060] of the instant specification that the homogeneous distribution of antimicrobial agents occurs during processing, as an intermediary step. The applicant is claiming a final product, and since the applicant teaches that the homogeneous distribution results in a final product with migrated concentrations of antimicrobial agents, the claim will be examined in this regard, i.e. to a final product with migrated antimicrobial agents.

Regarding claims 13, and 19-23, in review of the specification, the applicant teaches that the only antimicrobial agents that exhibit the ability to migrate are those seen in claim 17, 18, and instant paragraph ([0042]). In light of the instant disclosure it is unclear how any of the antimicrobial agents other than those taught in claims 17 and 18, will show this ability to migrate.

The applicant states on the record that the inorganic microbial agents used in Sakai (i.e. inorganic antimicrobial agents) are not soluble in resins therefore the inorganic antimicrobial agent will be disposed on the surface of the composite material as another inorganic aggregate. It is unclear how the applicant can teach the same inorganic antimicrobial agents in claims 13 and 19-23 and teach that they are evenly distributed since the applicant has argued and stated on the record that inorganic antimicrobial agents will only be distributed on the surface of the composite.

In regards to claim 16, the applicant states within the instant specification at [0051] that the quaternary ammonium compounds, when in a polymeric binder, are

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locked in place and therefore do not migrate to the surface. It is unclear how these compounds of claim 16 meet the requirement of claim 1. The applicant may state that the antimicrobial agent "further comprises" those antimicrobial agents of claim 16, since the applicant is supported for mixtures of quaternary ammonium compounds and antimicrobial agents that exhibit the ability to migrate. However, the claim as instantly presented is unclear.

Regarding claims 17 and 18, these claims appear to not have proper dependency. Claims 17 and 18 originally depended from claim 16, and as seen in paragraph ([0042] of the instant specification, are claims that were used to further limit the organic antimicrobial agent (OAA) when it is a agent that exhibits the ability to migrate through the binder. Since the applicant amended claim 16, and incorporated the migrating OAA into claim 1, claims 17 and 18 should properly depend from claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, and 8-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Appleton et al. (US 6,663,877).

Regarding claims 1, 2, 8-10, 13, 17, 18, and 24, Appleton et al. teach an artificial marble that comprises cultured marble onyx and solid surface materials and further comprises a resin matrix either with or without a filler (col. 1, lines 25-30). Appleton teaches adding at least one antibacterial agent to the artificial marble in order to provide a contribution over the prior art (col. 2, lines 42-63). Therefore Appleton teaches a composite comprising marble (an aggregate), a resin (polymeric binder, see col. 3, lines 1-25), an antibacterial agent (col. 3, lines 45-col.4 line 45), and a curing agent (col. 5, line 10-15). Since the materials are the same as instantly claimed, it is the Examiners position that the composite of Appleton will have an appearance similar to that of natural stone

Appleton teaches that the antimicrobial agent is dispersed in the polymeric matrix (col. 3, lines 45-52). Dispersed as defined by Merriam- Webster's Dictionary means "to distribute more or less evenly throughout a medium". Thus the dispersed agents reads on the applicants homogeneously distributed agents. Appleton teaches that the solid surface has an outer surface with an antimicrobial effect effectiveness within 24 hours, which shows that the agent tends to migrate towards the surface as well.

Furthermore, Appleton goes on to teach that the resin is a thermoset resin such as unsaturated polyester (col. 3, lines 1-7). Appleton teaches that the antimicrobial agent comprises organic materials such as 5-chloro-2-(2,4-dichlorophenoxy)phenol commercially known as Triclosan or Microban (see at least Appleton, col. 4, lines 29-

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45 and instant specification [0042]). The applicant teaches that antimicrobial agents such as Triclosan exhibit a migration towards the surface of the composite especially in conjunction with a polyester binder (see instant specification [0042] and [0043]).

Since Appleton teaches the same materials as instantly disclosed and claimed it is expected that they will behave in the same manner. It has been held that where the claimed and prior art products are identical or substantially identical in structure or are produced by identical or a substantially identical processes, a *prima facie* case of either anticipation or obviousness will be considered to have been established over functional limitations that stem from the claimed structure. *In re Best*, 195 USPQ 430, 433 (CCPA 1977), *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The ***prima facie*** case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed products. *In re Best*, 195 USPQ 430, 433 (CCPA 1977). Since Appleton teaches the same materials it is expected that the antimicrobial agent will be homogeneously distributed in the polymeric binder such that the antimicrobial agent migrates through said polymeric binder.

Regarding claims 11 and 12, the binder is taught to comprise monomers such as styrene (col. 3, lines 20).

Regarding claims 14-16, Appleton et al. teach that the antimicrobial agent may comprise quaternary ammonium compounds (col. 4, lines 30-35). The organic compound is taught to be present in an amount of 0.1% or greater. This range overlaps the instantly claimed ranges.

Regarding claims 19-23, Appleton teaches that the antimicrobial agent comprises both inorganic and organic agents. The organic agent for reasons stated above will migrate. The inorganic materials are dispersed, so for reasons stated above will be distributed homogeneously. The inorganic materials comprise silver salts and zeolites and are present in amounts greater than 0.1% (col. 3, lines 45-col. 4, line 29). The range of greater than 0.1% overlaps those ranges instantly claimed.

Regarding claims 25 and 26, Appleton teaches that the composite is formed into a finished product such as bathroom vanities and countertops (col. 2, lines 50-65)

Regarding claim 27, Appleton teaches that the composite comprises dyes and pigments (i.e. coloring agents) (col. 5, lines 10-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appleton et al. (US 6,663,877) as applied to claims 1, 2, and 8-27 above, in view of Sakai et al. (WO/0023524, wherein US 6,750,283 is referenced for its English translation).

As described above, Appleton teaches a composite synthetic marble countertop that comprises marble or solid surface materials, unsaturated polyester binder, triclosan

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and a curing agent. Appleton is silent to the amount of aggregate and polymeric resin binder present in the composite composition.

Sakai teaches a similar countertop in the art that comprises a marble or granite aggregate (col. 3, lines 40-48), an unsaturated polyester binder (col. 7, lines 35-40), curing agent (col. 7, lines 42), and an antimicrobial agent (col. 8, lines 59-67). Sakai teaches that the aggregate is present in amounts of 60, 80, and 95% or more (col. 4, lines 50-60), and that the resin binder is present in amounts of 40, 20 and 15% or less (col. 7, lines 46-52).

It would have been obvious to use the amounts of aggregate and resin given in Sakai for the composite material of Appleton, as Sakai has shown that these are workable and known ranges that would provide a composite material. These obvious known and taught ranges in the art overlap those ranges instantly claimed.

Claims 14, 15, 18, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appleton et al. (US 6,663,877) as applied to claims 1, 2, and 8-27 above.

Appleton teaches a composite material comprising antimicrobial agents in an amount of 0.1 or 0.5% or more. However, Appleton is silent to the exact ranges instantly claimed. However as admitted by the applicant on paragraph ([0046] and [0047]). "Those skilled in the art are capable of matching the appropriate antimicrobial material with the appropriate binder. Likewise those skilled in the art are capable of determining the appropriate loading of antimicrobial agent into the composite structural

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material". Therefore a routineer in the art would have found it obvious to choose polyester as a binder and Triclosan as an antimicrobial agent, in the amounts instantly claimed, as it has been shown that determining these constituents and loading amounts only involves routine skill in the art. Furthermore in light of this disclosure, the ranges taught in claims 14, 15, 22, and 23, would have been obvious as well.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al., (WO/0023524, wherein US 6,750,283 is referenced for its English translation) in view of Schweizer et al. "Triclosan: a widely used biocide and its link to antibiotics" or Ramirez et al. (EP 1428805).

Regarding claims 1 and 14-18, Sakai et al. teach a composite structural material comprising a natural aggregate (col. 3, lines 45-50), a polymeric binder, a curing agent (col. 7, lines 35-45), and an antimicrobial agent (col. 8, lines 59-67). Since the materials are the same as instantly claimed, it is the Examiners position that the composite of Sakai will have an appearance similar to that of natural stone.

Sakai is silent to the antimicrobial agent being homogeneously distributed such that the antimicrobial agent migrates through the polymeric binder. Triclosan, an organic antimicrobial agent, is known in the art and used in cementitious composite mixtures (Schweizer et al. (page 1, col.1-col.2). Ramirez teaches using organic antimicrobial agents mixed with cementitious aggregates, wherein Triclosan is preferred in amounts of 0.1-5.0 wt %. It would have been obvious to a person having ordinary

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skill in the art at the time the present invention was made to use Triclosan as an alternative antimicrobial agent in the cementitious composition of Sakai et al., since Triclosan is a known organic antimicrobial component in the art for providing biocidal protection to solid surfaces such as concrete.

Triclosan, as a substitute of the antimicrobial agent of Sakai, as proposed in the combination, results in the same composite and the same materials as instantly claimed. Therefore the composite is expected to behave in the same manner as instantly claimed. The applicant teaches that Triclosan migrates through polymeric resin binders, therefore, it is expected that the combination of Sakai with Ramirez or Schweizer will also have Triclosan migrate through the polymeric binder. It has been held that similar materials will possess similar characteristics.

Choosing an effective amount of the antimicrobial agent, to include the amounts instantly claimed is well within the grasp of a routineer in the art and would have been an obvious modification to the combination of Sakai and Ramirez or Schweizer.

Regarding claim 2, the natural aggregate may be granite, marble, quartz, glass, pottery etc (col. 3, lines 45-50).

Regarding claims 3 and 27, the composite comprises a filler, a pigment, or a colorant (col.3, lines 60-64 and col. 6, lines 57-65).

Regarding claims 4-7, Sakai teaches that the aggregate is preferably greater than 80 wt percent and less than 95% of the total weight of the composition (col. 4, lines 49-60) and the resin (polymeric binder) is preferably less than 20 wt % of the total composition (col. 5, lines 5-10) thus overlapping the instantly claimed ranges.

Regarding claims 8-12, Sakai teaches that the resin (polymeric binder) may be polyester or methyl methacrylate (col. 7, lines 40-col. 8, lines 50).

Regarding claims 13 and 19-24, Sakai teaches inorganic substances such as silver, silver oxide, and zeolites in amounts of 5% by weight or less thus overlapping the instantly claimed ranges. Since Sakai teaches overlapping ranges it is expected that the antimicrobial agent is present in an amount sufficient to demonstrate commercially acceptable efficacy against a microbe of concern.

Regarding claims 25 and 26, Sakai teaches using the composite as a kitchen counter (col. 8, lines 62).

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. as applied to claims 1-13, and 19-27 above, in view of Appleton (US 6,663,877).

Regarding claims 1 and 14-18, Sakai et al. teach a composite structural material comprising a natural aggregate (col. 3, lines 45-50), a polymeric binder, a curing agent (col. 7, lines 35-45), and an antimicrobial agent (col. 8, lines 59-67). Since the materials are the same as instantly claimed, it is the Examiners position that the composite of Sakai will have an appearance similar to that of natural stone.

Sakai teaches a composite comprising an inorganic antimicrobial agent. Sakai is silent to the use of organic antimicrobial agents. Appleton teaches a composite material in the same art as Sakai (col. 2, lines 40-65). Appleton goes on to teach that the

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antimicrobial agent may be inorganic, organic, or combinations thereof, with the inorganic materials overlapping those taught by Sakai (col. 8, lines 60-67), and the organic antimicrobial agents comprising Triclosan (col. 3, line 45- col. 4, lines 40). Appleton teaches that the amount of antimicrobial agent is 0.1 or 0.5% or more, thereby overlapping the instantly claimed ranges. Appleton further teaches that the agent is dispersed throughout the composite (i.e. distributed evenly). It would have been obvious to a person having ordinary skill in the art at the time the present invention was made to disperse Triclosan as an alternative antimicrobial agent in the cementitious composition of Sakai et al., since Appleton has shown that organic antimicrobial agents, such as Triclosan, are functionally equivalent and interchangeable with the inorganic antimicrobial agents taught by Sakai.

Appleton is silent to the exact ranges of organic antimicrobial agents instantly claimed. However as admitted by the applicant on paragraph ([0046] and [0047]). "Those skilled in the art are capable of matching the appropriate antimicrobial material with the appropriate binder. Likewise those skilled in the art are capable of determining the appropriate loading of antimicrobial agent into the composite structural material". Therefore a routineer in the art would have found it obvious to choose polyester as a binder and Triclosan as an antimicrobial agent, in the amounts instantly claimed, as it has been shown that determining these constituents and loading amounts only involves routine skill in the art.

Regarding claim 2, the natural aggregate may be granite, marble, quartz, glass, pottery etc (col. 3, lines 45-50).

Regarding claims 3 and 27, the composite comprises a filler, a pigment, or a colorant (col.3, lines 60-64 and col. 6, lines 57-65).

Regarding claims 4-7, Sakai teaches that the aggregate is preferably greater than 80 wt percent and less than 95% of the total weight of the composition (col. 4, lines 49-60) and the resin (polymeric binder) is preferably less than 20 wt % of the total composition (col. 5, lines 5-10) thus overlapping the instantly claimed ranges.

Regarding claims 8-12, Sakai teaches that the resin (polymeric binder) may be polyester or methyl methacrylate (col. 7, lines 40-col. 8 ,lines 50).

Regarding claims 13 and 19-24, Sakai teaches inorganic substances such as silver, silver oxide, and zeolites in amounts of 5% by weight or less thus overlapping the instantly claimed ranges. Since Sakai teaches overlapping ranges it is expected that the antimicrobial agent is present in an amount sufficient to demonstrate commercially acceptable efficacy against a microbe of concern.

Regarding claims 25 and 26, Sakai teaches using the composite as a kitchen counter (col. 8, lines 62).

Response to Arguments

Applicant's arguments filed June 1, 2009 have been fully considered but they are not persuasive.

The applicants argue that inorganic antimicrobial agents do not distribute themselves throughout a resin binder, and instead form an aggregate at the surface. The applicant however still claims that the antimicrobial agent migrates (forming higher

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concentrations at the surface) and further claims in dependent claims, that the antimicrobial agent may be a material that doesn't migrate (quaternary ammonium compounds) or it may be an inorganic agent (which the applicant states on the record fails to distribute itself throughout the composite).

The arguments are highly contradictory of the claims as instantly presented, and are found to be wholly unpersuasive.

Furthermore, it is noted that "the arguments of counsel cannot take the place of evidence in the record", *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner's position that the arguments provided by the applicant regarding that inorganic agents do not distribute themselves throughout the composite when a resin binder is used must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), "the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001".

The applicant has not persuasively shown that the inorganic antimicrobial agent will not be present throughout the composite of Sakai.

In regards to the combination of Sakai with Schweizer or Ramirez, the applicant seems to be arguing the references in a piecemeal fashion. The applicant states that the organic antimicrobial agents of Schweitzer and Ramirez would not homogeneously solubilize in the same manner as that which occurs in the present composition.

Triclosan is used as a substitute of the antimicrobial agent of Sakai, as proposed by the Examiner in the combination, the combination results in the same composite and the

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same materials. The applicant teaches that Triclosan migrates through polymeric resin binders, therefore, it is expected that the combination of Sakai with Ramirez or Schweizer will also have Triclosan migrate through the polymeric binder. It has been held that similar materials will possess similar characteristics.

The newly amended claims presented new limitations and required further search and consideration. The limitation of homogeneously distributed antimicrobial agents was given little to no patentable weight as this was shown to be part of an intermediary processing step, in which the final product comprised migrated agents. In the event that the applicant is able to show support and clarity to a homogeneously distributed and migrated agent, and further shows how this limitation distinguishes over Sakai, and Sakai in view of Ramirez or Schweizer, the examiner has applied new reference Appleton.

New reference Appleton is applied, to teach that it is known in the art to disperse (distribute evenly) antimicrobial agents throughout the composite as an intermediary processing step, and also to show that the antimicrobial agent migrates to the surface.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN C. LANGMAN whose telephone number is (571)272-4811. The examiner can normally be reached on Mon-Thurs 8:00 am - 6:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCL

/Timothy M. Speer/
Primary Examiner, Art Unit 1794